

FIG.1

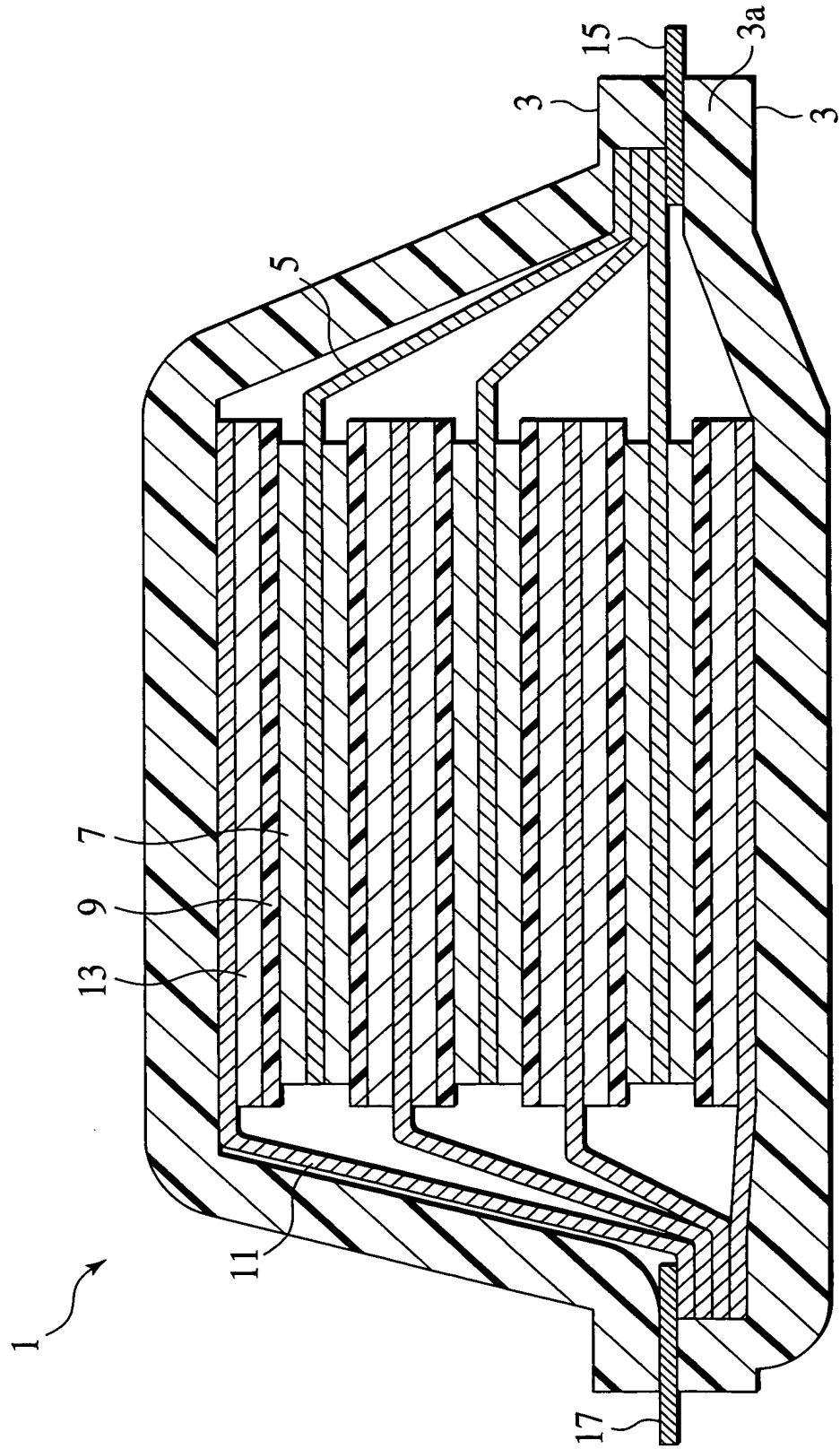


FIG. 2

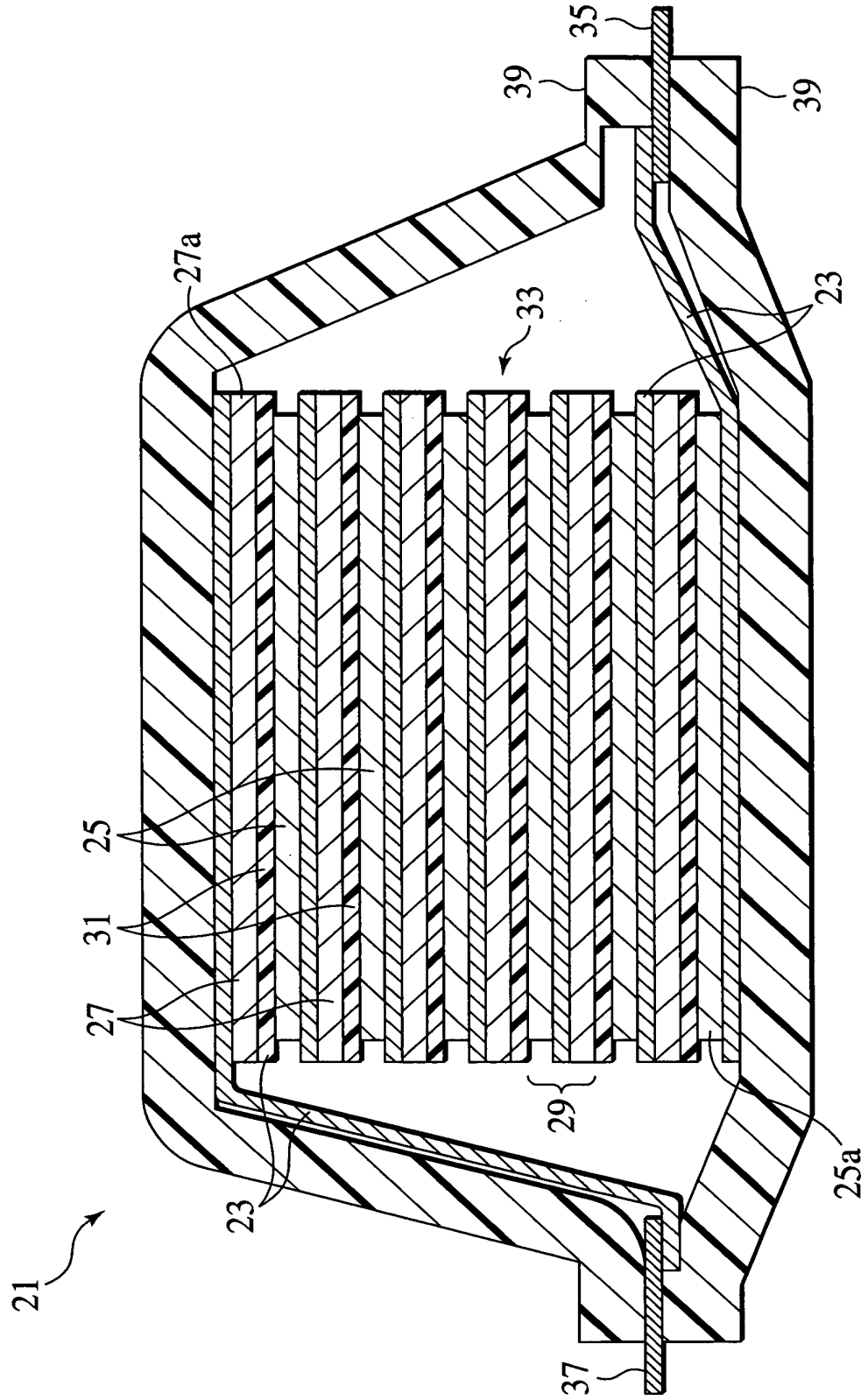


FIG. 3

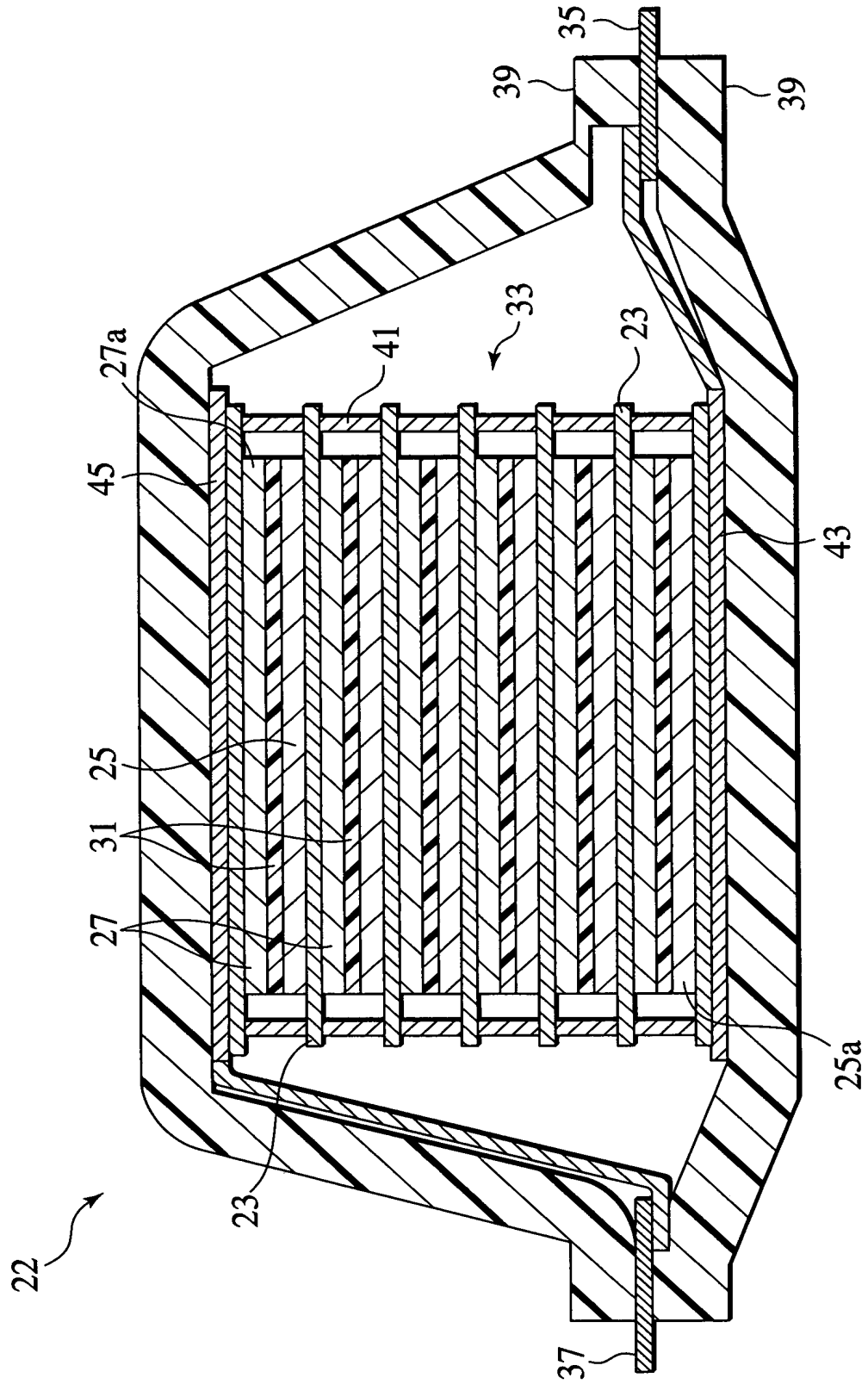


FIG.4

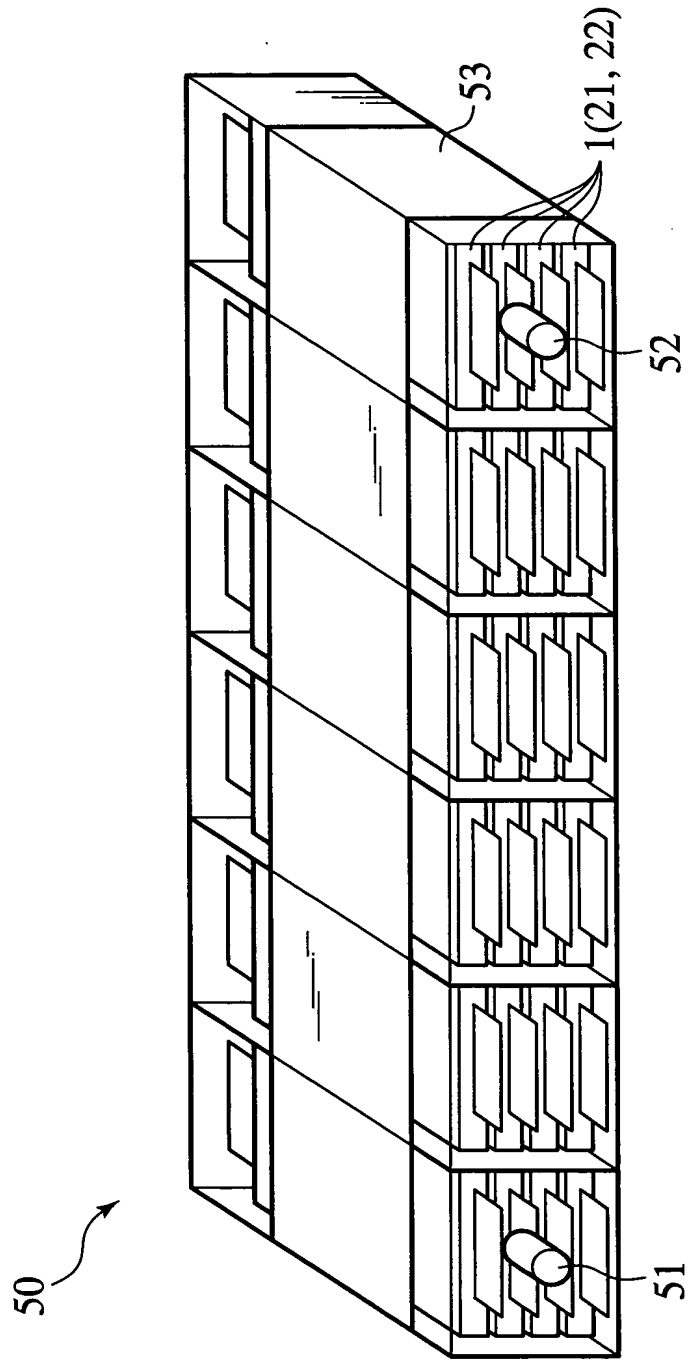


FIG.5

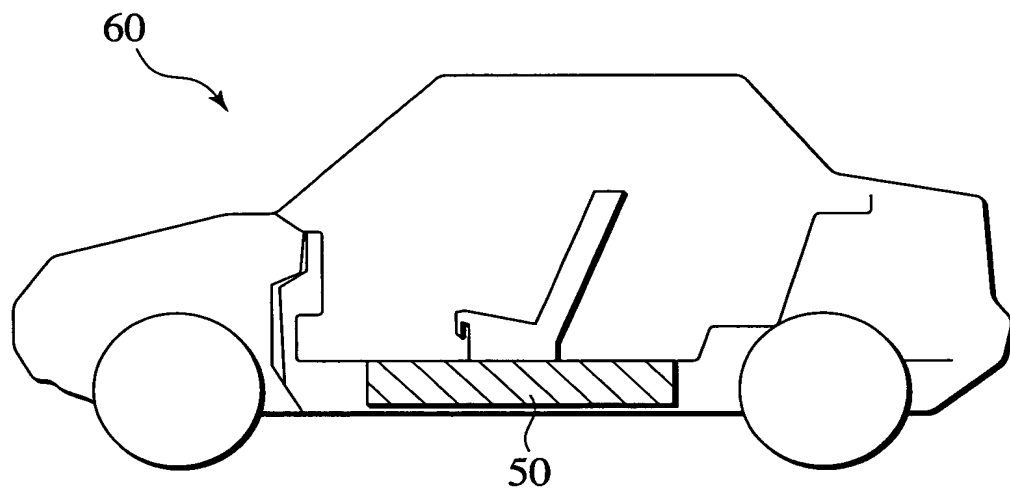


FIG.6

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	ANODE MATERIAL	LAYER THICKNESS ( $\mu\text{m}$ )	NUMBER OF BATTERIES CAUSING LITHIUM DEPOSITION (5A)	NUMBER OF BATTERIES CAUSING LITHIUM DEPOSITION(10A)
Ex. 1	BORON-ADDED GRAPHITE	30	0	0
Ex. 2	BORON-ADDED GRAPHITE	15	0	0
Ex. 3	BORON-ADDED GRAPHITE	5	0	0
Ex. 4	BORON-ADDED GRAPHITE	1	0	0
Ex. 5	BORON-ADDED GRAPHITE	0.8	0	0
Com. Ex. 1	BORON-ADDED GRAPHITE	70	2	3
Com. Ex. 2	BORON-ADDED GRAPHITE	50	1	2
Ex. 6	GRAPHITE	0.8	0	0
Com. Ex. 3	GRAPHITE	30	10	12
Com. Ex. 4	GRAPHITE	15	7	8
Com. Ex. 5	GRAPHITE	5	3	4
Com. Ex. 6	GRAPHITE	1	1	3
Ex. 7	BORON-ADDED HARD CARBON	30	0	0
Ex. 8	BORON-ADDED HARD CARBON	15	0	0
Ex. 9	BORON-ADDED HARD CARBON	5	0	0
Ex. 10	BORON-ADDED HARD CARBON	1	0	0
Ex. 11	BORON-ADDED HARD CARBON	0.8	0	0
Com. Ex. 7	BORON-ADDED HARD CARBON	70	3	4
Com. Ex. 8	BORON-ADDED HARD CARBON	50	2	4
Ex. 12	HARD CARBON	0.8	0	0
Com. Ex. 9	HARD CARBON	30	6	9
Com. Ex. 10	HARD CARBON	15	5	5
Com. Ex. 11	HARD CARBON	5	2	3
Com. Ex. 12	HARD CARBON	1	1	2
Ex. 13	SnO	30	0	0
Ex. 14	SnO	15	0	0
Ex. 15	SnO	5	0	0
Ex. 16	SnS	15	0	0
Com. Ex. 13	SnO	50	0	2
Ex. 17	GeO	15	0	0
Ex. 18	In <sub>2</sub> O <sub>3</sub>	15	0	0
Ex. 19	PbO	15	0	0
Ex. 20	Ag <sub>2</sub> O	15	0	0
Ex. 21	Sb <sub>2</sub> O <sub>3</sub>	15	0	0
	ANODE MATERIAL	LAYER THICKNESS ( $\mu\text{m}$ )	NUMBER OF BATTERIES CAUSING LITHIUM DEPOSITION (500mA)	NUMBER OF BATTERIES CAUSING LITHIUM DEPOSITION(1A)
Ex. 22	BORON-ADDED GRAPHITE	15	0	0
Com. Ex. 14	BORON-ADDED GRAPHITE	15	8	10

FIG.7

	ANODE MATERIAL	LAYER THICKNESS ( $\mu\text{m}$ )	AVERAGED MAINTENANCE RATIO OF CAPACITY(%)	
			5A	10A
Ex. 1	BORON-ADDED GRAPHITE	30	94.9	90.1
Ex. 2	BORON-ADDED GRAPHITE	15	96.5	93.2
Ex. 3	BORON-ADDED GRAPHITE	5	96.5	94.4
Ex. 4	BORON-ADDED GRAPHITE	1	96.2	94.8
Ex. 5	BORON-ADDED GRAPHITE	0.8	96.6	95.5
Com. Ex. 1	BORON-ADDED GRAPHITE	70	90.9	86.8
Com. Ex. 2	BORON-ADDED GRAPHITE	50	91.3	87.1
Ex. 6	GRAPHITE	0.8	94.8	92.5
Com. Ex. 3	GRAPHITE	30	75.5	70.5
Com. Ex. 4	GRAPHITE	15	79.3	76.3
Com. Ex. 5	GRAPHITE	5	83.5	81.0
Com. Ex. 6	GRAPHITE	1	90.5	88.4
Ex. 7	BORON-ADDED HARD CARBON	30	92.4	89.6
Ex. 8	BORON-ADDED HARD CARBON	15	93.2	91.9
Ex. 9	BORON-ADDED HARD CARBON	5	93.3	92.6
Ex. 10	BORON-ADDED HARD CARBON	1	93.0	92.7
Ex. 11	BORON-ADDED HARD CARBON	0.8	93.5	92.3
Com. Ex. 7	BORON-ADDED HARD CARBON	70	89.0	86.1
Com. Ex. 8	BORON-ADDED HARD CARBON	50	89.3	86.3
Ex. 12	HARD CARBON	0.8	93.7	92.5
Com. Ex. 9	HARD CARBON	30	78.5	71.2
Com. Ex. 10	HARD CARBON	15	80.7	78.5
Com. Ex. 11	HARD CARBON	5	83.6	81.5
Com. Ex. 12	HARD CARBON	1	91.5	90.4

	ANODE MATERIAL	LAYER THICKNESS ( $\mu\text{m}$ )	AVERAGED MAINTENANCE RATIO OF CAPACITY(%)	
			5A	10A
Ex. 22	BORON-ADDED GRAPHITE	15	93.7	91.5
Com. Ex. 14	BORON-ADDED GRAPHITE	15	78.3	72.5